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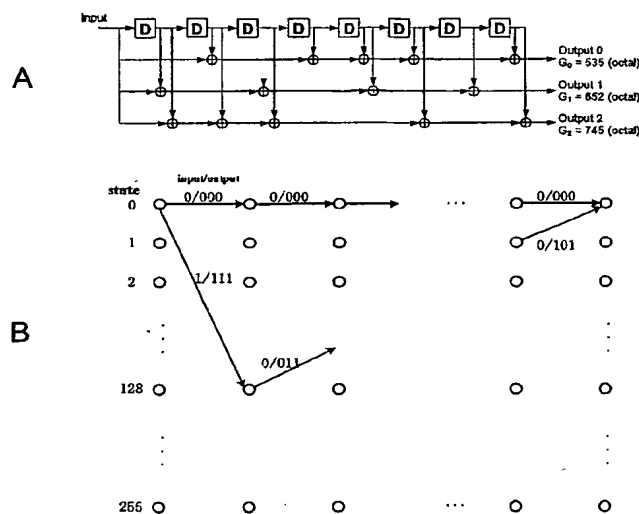
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(54) Title: **CONVOLUTIONAL ENCODER AND THE ENCODING METHOD THEREOF**



(57) Abstract: A convolutional encoder and the encoding method thereof, wherein the encoding method includes steps of: generating convolutional code according to the predefined criteria and with reference to the encoder's predefined convolutional encoding rate and constraint length; processing the data to be transmitted by using the convolutional code so that the coded data are suitable for propagation in multipath fading channel with Rayleigh fading, wherein the predefined criteria is to maximize the sum of Euclidean distance between each branch along the shortest error event path and each corresponding branch along the correct decoding path, and the shortest error event path is the decoding path having the minimum branches of non-zero Euclidean distance compared with the correct decoding path.

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